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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/633,605 | 08/04/2003 | Arkady Nikitin | | 6421 |

7590 09/23/2005
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EXAMINER

GEISEL, KARA E

ART UNIT PAPER NUMBER

2877

DATE MAILED: 09/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/633,605

Applicant(s)

NIKITIN ET AL.

Examiner

Kara E. Geisel

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-4 is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☒ Claim(s) 5-9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 August 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

The drawings are objected to because the image of fig. 1 is not of sufficient quality so that all details in the image would be reproducible in the printed patent. See 37 CFR 1.84 (b)(1). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

Claims 5-9 objected to because of the following informalities:

In regards to claim 5, line 7, it appears that there is a period after “an individual period value”, instead of a comma.

In regards to claim 6, line 2, “permissible number” is inconsistent with claim 1, which states “sufficient number”.

In regards to claims 6-9, all of the variables need to be defined in each claim, since they do not depend on a claim in which the variables are already defined (ex. In claim 6, ω and T_{AVE} need to be defined, since this claim does not depend on claim 5, which defines these variables).

In regards to claims 7 and 9, the claim needs to be in sentence form, including a period at the end of the claim.

Appropriate correction is required.

Allowable Subject Matter

Claims 1-4 are allowed over the prior art of record.

Claims 5-9 would be allowable if rewritten or amended to overcome the objections(s) set forth in this Office action.

The following is a statement of reasons for the indication of allowable subject matter:

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As to claim 1, the prior art of record, taken alone or in combination, fails to disclose or render obvious a method of calibration of magnification of a microscope with the use of a diffraction grating comprising determining a scatter of individual values of a period of the diffraction grating by multiple measurements of periods of the diffraction grating by a microscope in pixels in one area in a microscope field of view, calculating scatter based on the measurements, determining a sufficient number of measurement of the period for providing an accepted statistic error of a magnification of the microscope, and calculating a parameter corresponding to the magnification of the microscope based on the determined mean value of the period of the diffraction grating, in combination with the rest of the limitations of claim 1.

Additional Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art of record is Firstein et al. (USPN 5,585,211), Chernoff et al. (USPN 5,825,670), Nikitin et al. (USPN 6,807,314), and Nikitin (US Pubs 2004/0021075).

Firstein discloses a diffraction grating for use in a method of calibrating the magnification of a microscope.

Chernoff discloses a method of calibration of the magnification of a microscope with the use of a diffraction grating.

Nikitin discloses a method of calibration of the magnification of a microscope with the use of a diffraction grating comprising determining a mean period of a diffraction grating by irradiating the grating with a radiation having a known wavelength and analyzing a resulting diffraction pattern, calculating a mean value of the period based on measurements, and calculating a parameter corresponding to the magnification of the microscope based on the determined mean value of the period of the grating.

Nikitin discloses a method of calibration of the magnification of a microscope with the use of a diffraction grating comprising determining a mean period of a diffraction grating by irradiating the

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grating with a radiation having a known wavelength and analyzing a resulting diffraction pattern, calculating a mean value of the period based on measurements, and calculating a parameter corresponding to the magnification of the microscope based on the determined mean value of the period of the grating.

Conclusion

This application is in condition for allowance except for the formal matters stated above.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kara E Geisel whose telephone number is **571 272 2416**. The examiner can normally be reached on Monday through Friday, 8am to 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley, Jr. can be reached on **571 272 2800 ext. 77**. The fax phone number for the organization where this application or proceeding is assigned is **571 273 8300**.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Gregory J. Toatley, Jr.
SPE
Art Unit 2877

K.G.
KEG
September 19, 2005

[Signature]
ZANDRA V. SMITH
PRIMARY EXAMINER